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ABSTRACT

This paper presents a general rationale for investing in early childhood development (ECD) in Latin America that derives from scientific evidence about the importance of the early years in the formation of intelligence, personality, and social behavior. This rationale argues that the economic returns of ECD programs can be quite high (through increased productivity, cost savings, and potential employment effects), that inequalities can be moderated, and that children have a right to develop in a healthy way. Evidence from Latin America and elsewhere shows that programs designed to improve children's health, nutrition, and psychological condition in their preschool years can affect significantly children's development and readiness for school. A sound program strategy for ECD should include: (1) an initial assessment of the condition of children; (2) a search for ways to integrate child development components into ongoing education, health, and nutrition programs; (3) an emphasis on training and communication; (4) collaboration among governments, non-governmental organizations, and communities; (5) a process of carrying out evaluation and research; and (6) the establishment of an appropriate organizational strategy. An appendix contains case studies of projects conducted in Colombia, Turkey, and the Philippines. Contains 61 references. (MDM)

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*A View from LATHR*
*No. 32*

# *EARLY CHILDHOOD DEVELOPMENT PROGRAMS IN LATIN AMERICA: TOWARD DEFINITION OF AN INVESTMENT STRATEGY*

*by*

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PS 022058

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*August, 1992*

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Robert Myers is Coordinator of the Secretariat for the Consultative Group on Early Childhood Care and Development and the author of The Twelve Who Survive, a book about early childhood care and development in the developing world. This report is part of a larger effort in the Human Resources Division of the Technical Department, Latin America and the Caribbean Region, World Bank, to identify strategies to improve primary education in the region.

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## SUMMARY

This paper presents a general rationale for investing in early childhood development in Latin America that derives from scientific evidence about the importance of the early years in the formation of intelligence, personality and social behavior. The rationale also argues that the economic returns of early childhood development can be high (through increased productivity for both children and caregivers, through cost savings, and through potential employment effects), that inequalities can be moderated and that children have a right to develop in a healthy way. Moreover, the need is great and is increasing as social conditions continue to change rapidly.

Evidence from Latin America and elsewhere shows that programs designed to improve health, nutrition, and the psychosocial condition of children in their preschool years can affect significantly children's development and their readiness for school. These improvements make a child more likely to attend school, less likely to repeat or drop out, and a better performer in school. Through reductions in repetition and dropout rates, the efficiency of school systems is improved. Effects can favor children who are at a social disadvantage. However, improved readiness for school does not always translate into improvements in school progress and performance because of the poor quality of primary schools. Therefore, lack of a relationship between early intervention and school variables does not necessarily indicate that an early intervention is ineffective. Attention to the quality of early intervention is important, but an excessive concern with quality may be counter-productive.

Programming for early childhood development should incorporate the complementary approaches of caring for the child, educating caregivers, promoting community development, strengthening social institutions, and creating awareness and demand. To this should be added a variety of other objectives related to the child's development status and to flexibility and cost effectiveness. Overall a sound program strategy for early childhood development should include: an initial assessment of the condition of children; a search for ways to integrate child development components into ongoing programs in education, health and nutrition; an emphasis on training and communication; collaboration among governments, non-governmental organizations, and communities; carrying out evaluation and research; and establishing an appropriate organizational strategy.

## I. Objectives and Emphases of This paper

This paper builds upon an earlier work entitled, "The Eleven Who Survive: Toward a Re-Examination of Early Childhood Development Program Options and Costs," written for the World Bank in 1986 and published in March 1987.[1] That paper presented an argument for investing in programs of early childhood development, set out a framework within which to examine program options, provided some examples of costs and effects of early interventions, and concluded with some suggested actions.

In the paper, the arguments for investing in childhood development that were presented in the earlier document will be elaborated and refined somewhat, with particular emphasis on Latin America. The description of complementary approaches to programming that was sketched at that time will be extended. Also, changes will be noted in the context and climate for investment in early childhood programs that have occurred over the last five years. Additional information will be presented, from research and from concrete program experiences, that reaffirms the importance of early childhood investments and that should help Latin American countries and development agencies such as the World Bank to evaluate and reorient their strategies. In a final section, suggestions will be offered for specific actions that might be taken to strengthen programs affecting early childhood development.

The treatment of issues in this paper is influenced by the fact that it is being written at the request of the World Bank. It will, for instance, give special attention to economic benefits anticipated from programs, but this will be done within a broad social view of benefits (and costs) to individuals, communities and societies. Most examples will come from Latin America. However, relevant information from programs in other parts of the developing world will also be included.

Also influencing the treatment of early childhood development in this paper is a particular interest that links early childhood development to basic education, and, more specifically, to primary schooling. This interest derives in part from the World Bank's active involvement in the World Conference on Education for All (WCEFA), as one of the four main organizers. At the Conference, child care and development emerged as an important part of basic education.

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[1] The full citation is: Robert G.Myers and Rachelle Hertenberg, "The Eleven Who Survive: Toward a Re-Examination of Early Childhood Development Program Options and Costs," Washington: The World Bank, Education and Training Department, Operations Policy Staff, March 1987. Report No. EDT69.

This paper also draws heavily on Chapter 10 from R.G. Myers, The Twelve Who Survive. London: Routledge, 1992, and on two papers prepared for the Consultative Group on Early Childhood Care and Development: R. Halpern and R.G. Myers, "Effects of Early Childhood Intervention on Primary School Progress and Performance in the Developing Countries," Ypsilanti, Michigan, High/Scope Educational Research Foundation, April, 1985. (Mimeo); and, R.G. Myers, "Effects of Early Childhood Intervention on Primary School Progress and Performance in the Developing Countries: An Update," Ypsilanti, Michigan, High/Scope Educational Research Foundation, February, 1988 (Mimeo).

In the following pages, the emphasis will be on early care, development and education. From time to time the paper will use the phrase, "**initial** education" (a phrase invented in Latin America), interpreted as the education of children occurring **from birth** up to the point of entrance into primary school. The relationship of that initial education (which can occur in the home or in various forms of preschools) to the entrance, progress and performance of children in primary schools will also be stressed.

Because this paper emphasizes the educational component of early childhood development and the potential educational outcomes of investments in early childhood development, three clarifications need to be made:

*Goals of child development other than improvements in schooling are also important.* Improved adjustment to and success in primary school is only one of the hoped-for outcomes for children who participate in programs intended to enhance early childhood care and development. It may not be the most important. The set of schooling outcomes accompanies and overlaps other important purposes such as improving a children's physical health, learning to learn, providing child care that benefits children while parents work, rehabilitating children who are disabled, inculcating particular moral, political, or religious values, and generally improving the quality of life for children. Even in a program that focusses on preparation for school, it should be recognized that the benefits to investment in an early childhood development will be greater than the schooling benefits.

Moreover, schools are only one of several learning environments for a child. Learning, hence education, occurs also in the home and community, for instance. It is important, therefore, not to lose sight of the broader question of the effects of early childhood programs on the general ability of a child to learn.

*Early childhood development and readiness for schooling involve more than cognitive and social readiness.* When links are made between early childhood development and primary schooling, there is a tendency to think narrowly about child development as if "cognitive" or "mental" development were its only component.[2] Instead the discussion is based on an integrated view of child development that crosses disciplinary and sectoral lines. In that holistic view, physical, social and emotional development are as important as cognitive development.

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[2] To be as clear as possible about child development, as used in this paper, the following characterization is offered. Simply stated, child development refers to a process of change in which children become able to handle ever more complex levels of moving, thinking, feeling and interacting with people. Development begins pre-natally and occurs throughout life. Development is different from growth; the latter is characterized by increases in size, the former by changes in complexity or function. Development is multi-dimensional: it includes a physical dimension (the ability to move and coordinate); an intellectual dimension (the ability to think and reason); a social dimension (the ability to relate to others); and an emotional dimension (self-confidence and the ability to feel). These several dimensions are inter-related and must be considered together. All children develop and there is a general sequence of pattern to that development. But the rate and character and quality of development will vary from child to child and from culture to culture.

And, the nutritional status and health status of a child are as important to early and later learning and education as the mental and social well-being of a child. This implies that non-educational dimensions of development should be included in programs that emphasize educational goals or are located within the education bureaucracy, just as the educational or psycho-social dimension of development should be included in programs located within the health sector or in nutrition programs.

*Schools as well as children need to adjust.* The idea that children should be ready for school, and that early childhood interventions can help that to happen, should not be separated from or subordinated to the equally important idea that schools should be ready for children. Often, there seems to be an assumption (by educators and parents alike) that the characteristics and methods of schooling are fixed and that children should be adjusted to them. However, it may be as reasonable to expect schools to change, for instance, their initial language of instruction as it is to expect a child to arrive with mastery of an "official" language that is not the mother tongue. Or, it may be as reasonable to expect the curriculum to vary from region to region, as it is to base the curriculum on centrally-determined, standardized material that is not recognizable or relevant to many children entering the primary school. Indeed, investments in preparing children for school should be considered together with investments that prepare schools for children and that these not be viewed as part of a "zero sum game."

With these clarifications in mind, we turn now to a description of the changing conditions that frame our discussion, with emphasis on changes in the last five years. In general, these changing conditions: 1) help to explain a more receptive international climate and increasing demands for early childhood development programs; and, 2) suggest that program experience has grown appreciably in recent years, providing us with many examples to be drawn upon in future program planning and implementation.

## II. Why Invest in Early Childhood Development?

The argument for greater attention to investing in programs of integrated attention to the development of young children goes roughly as follows:

*The need is great.* Millions of children suffer from seriously delayed or impaired physical, mental, social and/or emotional development during their first years of life. As a result, these children are being condemned to unproductive, unrewarding and dependent lives.

*Children have rights.* Allowing disability and arrested development to occur when it could be prevented is a violation of basic human rights. The fact that children are dependent on others for satisfaction of their rights creates an even greater obligation to help and protect them.

*Scientific evidence is supportive.* It is well established, scientifically, that the early years are critical in the formation of intelligence, personality, and social behavior, and that the effects of early neglect can be cumulative. Evidence comes from research in physiology, nutrition, psychology, education and other fields. To cite a few of the findings:

- Brain cells are formed during the first two years. Stimulation of a child's senses affects the structure and organization of neural pathways in the brain during the formative period. By age 6, most of these connections are made (or not, as the case may be). Thus, providing opportunities for complex perceptual and motor experiences at an early age favorably affects various learning abilities in later life and can even compensate, at least partly, for deficits associated with early malnutrition (Dobbing, 1987).

- Children whose caregivers interact with them in consistent, caring ways will be better nourished and less apt to be sick than children not so attended (Zeitlin, Ghessemi, and Mansour, 1990).

- Establishing a loving relationship in the early months of life has been shown to affect the ability later in life of a person to love and to establish permanent relationships (Sroufe and Cooper, 1988).

- Longitudinal studies demonstrate long-term effects with a variety of intervention programs. These effects go beyond the learning of basic abilities to include: improved school attendance and performance, reduced repetition, increased employment and reduced delinquency during the teenage years and reduced teenage pregnancy (Berutta-Clement, et.al., 1984 and Myers, 1991).

*Economic returns can be high.* Improving a young child's health and nutrition, and providing opportunities for stimulating interaction and early education can bring a high economic return to society as well as to the individual. Without recurring to a scientific literature, common sense suggests that a person who is well-developed physically, mentally, socially and

emotionally will be in a better position to contribute economically to family, community and country than a person who is not. Economic returns take several forms:

- *Increased productivity of participating children.* In the long chain of causation that links early childhood development to later productivity, early ability affects later ability, educational attainment, and occupational placement and experience -- all of which influence adult productivity. A growing body of empirical evidence suggests that early childhood programs have the potential to affect early ability by improving both physical and mental capacity (Maguire and Austin, 1987). They can also have an affect on enrollment, progress and performance of children in school (Myers, 1992) and, in turn, bring important changes in skills and outlooks affecting adult behavior (e.g., Inkeles and Smith, 1974). Schooling helps build skills such as the ability to organize knowledge into meaningful categories, to transfer knowledge from one situation to another, and to be more selective in the use of information (Rogoff, 1980; Triandis, 1980). Schooling facilitates greater technological adaptiveness (Grawe, 1979). It relates to both increased productivity by farmers (Lockheed, Jamison and Lau, 1980) and by workers in the informal sectors (Colclough, 1980).

- *Cost savings.* Preventive programs produce savings by, for instance, improving the efficiency of educational systems through reductions in dropout, repetition and remedial programs. Similarly, a program result may be to lower health costs through early diagnosis and by developing better health habits. Or, other social program costs may be reduced such as welfare payments or judicial and penal costs.

- *Increased productivity of caregivers.* Child care and development programs can free up the time of caregivers for productive purposes. offer also the possibility of increased labor force participation by women and they can free older siblings to learn and earn as well.[3]

- *Employment effects.* Related to the previous argument, but distinct from it, is a potential economic effect that will depend more explicitly than the others on the way in which early childhood programs are structured. First, creating programs can create jobs that are more stable and productive than, for instance, taking in laundry or street vending. Second, most programs require the procurement of food and materials, and the construction of improvement of the program setting. These can be contracted locally, providing some additional income to communities.

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[3] Although child care programs are often considered separately from child development or early education programs, they should be the same in concept. Child care programs should be more than custodial and should provide the same kind of stimulation and education that develop-mentally-oriented programs provide. All early education programs that are organized outside the home, per force, have a custodial and child care dimension which needs to be recognized.

*Inequalities can be moderated.* Investment in early development can help to reduce economic and social inequities. Children living in conditions of poverty and/or discrimination often fall behind their more fortunate peers in some aspects of their development at an early age. This reinforces existing differences. In the short run, investments in programs of early childhood care and development can reduce (but seldom eliminate) the growing gaps in development, and therefore can reduce the differential consequences. Indeed, there is increasing evidence that children from more disadvantaged backgrounds can profit more from good early childhood programs than more advantaged children (Myers, 1992).

*There are other effects as well.*

- *Inter-generational effects.* To the extent that programs of early childhood care and development affect subsequent education, the evidence suggests that they will also have an affect on fertility and population growth.

- *Multiplier effects.* Especially in the case of programs of parental education, the immediate effects on one child will carry over to the raising of additional children.

*Effective program options exist.* A set of complementary program options and of effective program models within each option provides experience which can be draw upon to help ensure that future programs are effective.

*It is affordable.* The cost of early childhood programs need not be high. In some cases, the programs can pay for themselves.

In light of the above arguments, the reasoning that supported neglect of child care and early education projects by development agencies such as the World Bank in the past is no longer convincing. And, "believers" should be able to make their case, drawing on evidence and examples, including those that were presented in "The Eleven Who Survive" and that will be presented in this paper.

## III. The Changing Context

### Changing Social and Demographic Conditions

Several long term general trends affecting early childhood care and development have continued over the last five years.

*Changes in the child survival rate.* The infant mortality rate (IMR) has been more than cut in half over the last 30 years. In 1960, 5 of every 6 children born lived to see their first birthday (83%). By 1986 when the first paper was written for the World Bank, 11 of 12 (92%) children survived to age one. By the end of the century, 19 of every 20 (95%) children born are expected to survive to age one. Today, in 1991, that indicator is probably 13 of 14 (93%).[4]

The continuing decline in infant mortality presses us to think about what happens to the increasing number of children who "survive," as defined by the infant mortality rate. It presses us to change our idea of survival and to define survival over a longer period and in terms of a continuum that runs from death to good health. The closer to good health a child is along that continuum, the greater the chances of survival. Thus, survival and child development are recognized as simultaneous, not sequential.

Most children who now survive to age one live in the same difficult circumstances that put them "at risk" of death; these conditions now place them at risk of delayed or debilitated development. In "The Eleven Who Survive" we argued that the time has come for greater attention to the care and development of these survivors, and for integrated programs of child survival **and development**. As governments and international organizations look for ways to extend their successes with programs directed toward survival, they are beginning, with reason, to look at the "and development" part of the Child Survival and Development Revolution.

*Increasing labor force participation by women.* Women continue to enter the paid labor force in increasing numbers, influenced by such changes as a shift to a cash economy, economic stagnation, or by changing social beliefs. In Latin America the female participation rates increased from about 23% in 1960 to about 31% in the early 1980s (see ILO, 1990). In some cases women must take on work done by men who have migrated to seek better work in cities or in mines. The number of women-headed households is increasing. These changes place additional stress on women, to whom society continues to assign the main responsibility for child care. They often work a "double day." In these stressful conditions, a mother who must work so that her family can survive may love a child and believe that she should devote time and energy to her, but she may not be able to do so; she needs help. Among other things, she needs alternative forms of child care. The demand for such alternatives is growing.

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[4] According to statistics from UNICEF, the IMR rate was 92 per 1000 in 1980, 84/1000 in 1985, and 76/1000 in 1988 (UNICEF, 1988, 1991). If we project further reductions at a declining rate, it does not seem out of place to suggest that the actual IMR in 1991, worldwide, is about 70/1000, or, about 1 in every 14 children. If one of every 14 dies, then 13 children (vs. 11 in 1986) manage to live to age one.

*Shifting family patterns.* The help that families need with child care is not as nearby as it once was. Extended families are no longer as common as they once were. As migration and progressive urbanization occur, members of an extended family -- grandmothers, for instance -- may remain in rural areas or themselves be at work outside the home. These changes affect both the possibility of direct care and the socialization of new mothers that grandmothers have given in the past. Nor are there as many sibling caregivers as there once were; families are smaller and the idea that schooling is a child's work is increasingly accepted. Still some older children are denied the chance to go to primary school because they must care for younger siblings.

These changes in work roles, in location, and in family structures and organization all require changes in childrearing practices and in childcare arrangements. These have not kept pace, to the detriment of young children's development.

**Changing Economic and Political Conditions**

Turns in the economic and political fortunes of some countries over the last two years have had some positive effects on the climate for investment in early childhood development and related social programs. In the early 1990s there is evidence in parts of Latin America that the worst of the recession of the 1980s may be moderating. This apparent shift has provided hope, but could be ephemeral. Economic change, if it is real, could open up new options. However, the pace of economic renewal varies significantly from place to place. In some there is no renewal. It is unlikely, therefore, that the change will be great enough to counter the need for continued attention to economic adjustment policies and that these policies will need to incorporate a human dimension, including attention to the plight of children who live in conditions putting them "at risk".

During the last several years, the problem of indebtedness has taken on increasing importance and a new approach has emerged. The mechanism of "debt swaps," in which debt is written off on the condition that a debtor government makes a local currency contribution to a particular program, has been used in some cases to support early childhood programs.[5] The possibility that additional funds for social investments can be liberated in this way has given some hope to early childhood program advocates, among others.

Perhaps the most dramatic turn of recent years has been in the political arena. With the declaration of an end to the "Cold War," major new initiatives to reduce arms have also fostered hope that new funds will become available for social programs, including those directed to early childhood. Whether or not this turns out to be a false hope, it has stimulated reflection and creative thinking about social problems and their possible solutions.

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[5] For instance, the Netherlands and UNICEF have concluded a debt buy-back totalling US$6.25 million which will generate US$13 million in local currencies in Ecuador, Honduras and Jamaica, with funds earmarked for programs benefitting children.

**Increasing Attention to the Young Child**

Based on statistics from UNESCO's Regional Office for Latin America and the Caribbean on "pre-school education", coverage grew from 7.9 percent in 1980 to 15.0 in 1986 (UNESCO/OREALC, 1990). The annual rate of growth of 10.4 percent during that period was much higher than that for primary schooling (1.6 percent) or secondary education (3.8 percent).[6] In part, the higher percentage of growth simply reflects the lower base from which pre-primary expansion is occurring. But in part it reflects a response, particularly by governments, to increasing need and demand.

The overall rate of 15 percent coverage for preschool was calculated by comparing the number of children participating in identifiable preschool programs with the population of children ages 0 to 5 even though most pre-school programs only enroll children ages 3 to 5 or 6 years. Using the percentage of children enrolled in relation to the ages 3 to 5 (or 4 to 6) years of age rather than from 0 to 5, the preschool coverage for the region would be closer to 30 percent of the age group. Considering that rapid expansion of preschooling has occurred during a time of extraordinary pressure on the economic re-sources for most Latin American governments, this growth is a particularly significant accomplishment.

Moreover, most preschool statistics do not pick up participation in non-formal preschool programs and they leave out programs that are not the responsibility of the education sector. For instance, the more than 800,000 children who are in the home day care program of Colombia would not be included in the preschool statistics because that program is not considered an education program, even though it includes an educational component. And many private preschool programs are not picked up in the statistics. Therefore, the 30 percent figure is probably a minimum figure.

These improvements (at least numerically) in attention to young children in Latin America are noted here for two reasons. First, the increases appear to reflect a political recognition that there must be responses to a new need and demand arising from the kinds of changes we have described above. Second, the figures suggest that **this level of education is now beginning to grow to a size where it must be fully incorporated into discussions of education**. It is beginning to reach in significant ways into so-called "disadvantaged" populations. It is approaching a point at which attention to the quality of the interventions needs to be followed very closely; with size there is a tendency for quality to decrease. For these reasons, the evolution of initial education it is at a critical point and it would be unfortunate not to seize the opportunity while there is still a chance to have a major influence on the course of its development.

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[6] UNESCO, Oficina Regional de Educación para América Latina y el Caribe, Situación Educativa de América Latina y el Caribe, 1980-1987. Santiago, Chile: UNESCO/OREALC, 1990, p.14.

Moreover, the recent expansion of early childhood programs has produced important additional experience that can be drawn upon as new programs are planned. New ways of dealing with the potential problems accompanying expansion are being tried out with some success. The variety of models that are relatively low in cost and with different degrees of effectiveness is impressive. There are many lessons to be learned and applied. That will be evident as examples are presented later.

**Changing International Awareness**

An important change in climate has occurred since 1986 in the attitude of international institutions toward investing in early childhood care and development. This has occurred in part as institutions have sought new lines of activity to complement their work on survival, but also because three specific international events have given new visibility to the child:

- In November, 1989, a "Convention of the Rights of the Child" was approved by the General Assembly of the United Nations, urging signatories to, "...insure to the maximum extent possible child survival and development" (Article 6). It also indicates that, while placing primary responsibility for a child's upbringing with parents and families, signatory States must help parents and must "insure the development of institutions, facilities and services for the care of children." (Article 18.2)

- In March of 1990, the World Bank joined with UNICEF, UNESCO and the UNDP in organizing a "World Conference on Education for All" (WCEFA), bringing together governmental representatives from over 150 nations and representatives from more than 200 non-governmental organizations. The Declaration approved at the Conference included the following statement:

  > "Learning begins at birth. This calls for early childhood care and initial education. These can be provided through arrangements involving families, communities, or institutional programs, as appropriate." (Article 5)

  The WCEFA Framework for Action also set as one of the targets to be considered in plans for the 1990s:

  > "(1) Expansion of early childhood care and development activities, including family and community interventions, especially for poor, disadvantaged, and disabled children;.." (Paragraph 8)

- A World "Summit for Children" occurred in September, 1990 that brought together 70 Heads of State to discuss the plight of children and to commit themselves to improvements. A follow-up Plan of Action incorporated as a goal

the expansion of early childhood development activities, following the recommendations of the WCEFA. The Summit has given additional impetus to activities underway and is opening the door for new efforts to strengthen childcare and development.

The changing international climate is also evident in the recent discussions and actions of international organizations,[7] including the World Bank, to which we now turn.

**The Role of the World Bank**

A review carried out by the Bank of its involvement in early childhood development as of August 1985 led to the conclusion that, in relative terms, very little was being done directly within the Bank to attend to child development and virtually nothing had been done within the education sector (Brems, 1985). A number of health and nutrition projects had the collateral affect of improving overall child development, looked at in an integrated way, and some of these even included a child care or education component. At the time, however, only one project was found that fell within the education sector and in that project, child development was approached very indirectly by including a day-care center within the design for construction of rural development training centers. The day care facility was provided in order to facilitate women's participation in training.[8]

The 1985 finding apparently reflected decisions taken within the Bank at the beginning of the decade. At that time, the prevailing wisdom, as presented in a commissioned working paper written for the Bank by Moshe Smilansky (1978), was that, on the basis of the available evidence, giving priority to support for preschool interventions could not be justified. Smilansky noted that "traditional" kindergartens do not seem to protect disadvantaged children from lagging behind or failing in school and that although preschool programs might have an effect on IQ, most studies showed a "wash-out" effect in the early years of primary school. Programs which might produce longer-term results were dismissed as infeasible because it was felt that such programs would have to be too expensive or sophisticated.

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[7] For instance, UNICEF field offices are presenting a much greater number of early childhood development initiatives to the Executive Board in 1992 than in the previous several years. A full time program officer has been hired based in New York in order to mount a more systematic and broader program of integrated child development. USAID is actively considering a new early childhood program initiative. Major NGOs (Save-the Children and the Christian Children's Fund) have given a new place to early childhood development in their programming.

[8] In all, 35 activities were identified that provided one of the following: food supplementation, health and nutrition screening or services, education for pre-schoolers, and creche or day-care services. The bulk of these activities were found within Health, Population and Nutrition (22) and Urban Development (10). Among the programs aimed at children, 15 included food supplementation, 20 health/nutrition screening or services, 5 education for pre-schoolers and 6 creche of day care. Among programs aimed at caretakers, 4 were training programs, 9 included adult education on children, and 15 were home visiting programs. The construction of child care centers was supported in 14 activities and community centers in 8.

Since 1985, evidence supporting the above assertions has changed. Longer term effects of quality preschool programs have been identified. Moreover, the view of program effects has broadened from one centered on IQ to one looking at educational and social behaviors of children. Even though IQ effects associated with some early interventions may be neutralized as children mature, behavioral effects seem to be maintained. In addition, experiences now abound of less expensive, but effective alternatives to the formal, traditional preschools criticized by Smilansky. These non-formal programs may be set in centers outside the home or may involve the education and support of families, as suggested by Smilansky.

As changes in evidence and in the climate for investment have occurred, the position within the Bank with respect to early childhood care and development seems to be changing as well. For instance, two recent education papers have recognized the importance of the early childhood period for learning by including the child as one of the important inputs into primary schooling. In "Education and Sub-Saharan Africa," the primary school section includes a statement on "ensuring teachable pupils" (The World Bank, 1988, p. 45). This is echoed, but with greater emphasis, in "Improving Primary Education in Developing Countries" (Lockheed and Verspoor, 1991) which explicitly incorporates a child's learning capacity, as determined by prior learning experience, nutrition and health, into the model used to examine and make recommendations for improving school effectiveness. Promising policy options for improving primary schools that are treated in the paper include targeted investment in preschools and alternatives to in-school provision of learning experiences.

In 1991, no formal review of the Bank's involvement in early childhood programs was undertaken to provide a direct comparison with 1986. However, the number of activities that might be classified as early childhood care and development or as "initial education" has increased markedly. Within Latin America and the Caribbean, for instance, loans have been approved for Colombia, Venezuela, Brazil, Chile and Ecuador, and initial education or child development components are included in discussions being held at present in Mexico, Uruguay, El Salvador, and Bolivia. These actions are located variously within nutrition, social sector, and education loans.

**Summary**

There is evidence that demographic and social changes require increased attention to early childhood care and development. There seems to be a favorable shift in the economic and political climate affecting decisions to invest in early childhood programs. Countries are investing their own scarce resources, as indicated by the rapidly increasing enrollments, even during the difficult economic times of the 1980s. The climate within international organizations, including the World Bank, appears to be opening toward new consideration of early investments. With expansion, a range of new experiences is available to be drawn upon when reconsidering policies and programs.

Having written the above, it is tempting to conclude that, given changes occurring over the past 5 years, the main task is no longer to convince people that investing in early childhood

care and development is worthy but is, rather, simply to provide examples of effective programs and to improve the basis for choosing one or another program option in particular contexts. That conclusion is premature, however. Recent experience also suggests that the general level of knowledge and awareness of the potential benefits from early education investments is still low and in many cases, skepticism is still high.

In the World Bank as well as in most other international organizations, the importance of investing in integrated attention to young children (going beyond the effect of nutrition or health on survival), is restricted to a few "believers" and is not yet captured adequately or broadly in policy and program documents. For instance, the education section of the document prepared by the World Bank for its presentation at the Children's Summit on September 30, 1990, made no mention of early education, let alone child care and development (World Bank, 1990). It is important, therefore, to continue providing a sound rationale for investment that incorporates economic as well as emotional and scientific arguments. With this prelude, the paper now turns to a description of complementary program approaches and an examination of evidence of program effectiveness.

## IV. Complementary Program Approaches

In order to counter the narrow, "institutional," often expensive, and age-restricted image associated with preschool programs, a topology of five complementary program approaches to early childhood care and development was set out in the previous paper. These approaches focussed respectively on:

- Caring for the child;
- Educating caregivers (particularly parents);
- Promoting child-based community development;
- Strengthening social institutions involved in early childhood programs; and
- Creating awareness and demand.[9]

Although improved child development is the ultimate goal in all five approaches, each approach is directed toward a different set of participants (beneficiaries). Objectives can differ as well. And each approach can be pursued in a variety of ways, as indicated in the last column of Figure 1, reproduced here from the previous paper.

Each of these program approaches should be examined with respect to two cross-cutting considerations: "integration" (running from mono-focal to "holistic") and "community participation" (running from none to complete responsibility and control). A "holistic" approach is important (because child development is a holistic process) and even if vertically-organized services cannot be integrated, they can be made to "converge" on the same population in order to have the best effect. Much community participation is superficial and is used often in an attempt to reduce costs to government. Participation is seldom considered as an end in itself or as a means of building self-reliance in a community, or in relation to the organization and motivation needed at a community level for a program to be sustained.

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[9] This set of complementary approaches derives from the ecological model of development presented by Urie Bronfenbrenner (1979). In that model, child development is seen as occurring as a child interacts with the environment at four different levels corresponding, approximately to the family, the community, social institutions, and the larger culture or ethos.

**Figure 1**
Complementary Approaches to Programming for Early Childhood Development

| Program Approach | Participants/ Beneficiaries | Objectives | Models |
|---|---|---|---|
| Deliver a Service | The Child<br>• 0-2 years<br>• 3-6 years<br>• 0-6 years | • Survival<br>• Comprehensive development<br>• Socialization<br>• Rehabilitation<br>• Improvement of child care | • Home day care<br>• Integrated child development centers<br>• "Add-on" centers<br>• Workplace<br>• Preschools formal/ non-formal |
| Educate caregivers | • Parent, family<br>• Sibling(s)<br>• Public | • Create awareness<br>• Change attitudes<br>• Improve/change practices | • Home visiting<br>• Parental education<br>• Child-to-child programs |
| Promote community development | Community<br>• Leaders<br>• Promoters | • Create awareness<br>• Mobilize for action<br>• Change conditions | • Technical mobilization<br>• Social mobilization |
| Strengthen national resources, capabilities | Program personnel<br>• Professionals<br>• Para-professionals | • Create awareness<br>• Improve skills<br>• Increase material | • Training<br>• Experimental, demonstration projects<br>• Strengthening infrastructure |
| Advocate child development programs | • Policymakers<br>• Public<br>• Professionals | • Create awareness<br>• Build political will<br>• Increase demand<br>• Change attitudes | • Social marketing<br>• Ethos creation<br>• Knowledge dissemination |

The cross-cutting dimensions of the earlier framework can be extended, as shown in Figure 2. To "integration" and "participation", emphasized earlier, the following five other characteristics can be added, against which a program can be judged:

- Focussing on families and communities in which children are at risk of delayed or debilitated development.
- Providing flexibility and adjusting programs to different sociocultural contexts.
- Supporting and building upon local ways of coping effectively with problems of care, development and socialization.
- Seeking financially feasible and cost-effective options.
- Seeking the largest possible coverage for children at risk.

**Figure 2**
Programming for Early Childhood Development: A Comprehensive Framework

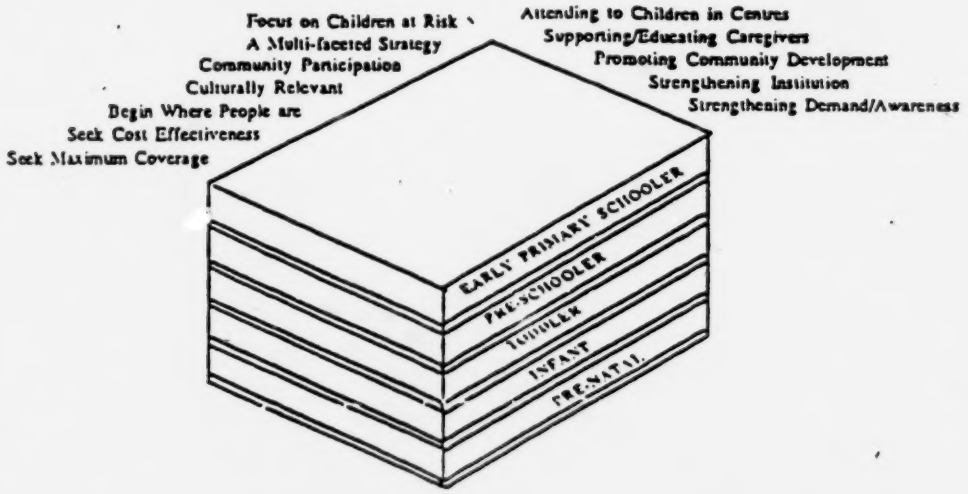


Figure 2 also includes a third dimension, defined by the developmental status of children. It is not enough to think of programming for child development or learning when a child reaches the age of 3. Child development is a continuous process that begins prenatally and extends throughout the entire period of a child's early life. Clearly, different moments in the process will require somewhat different approaches. If a child development strategy is to be comprehensive, it should respond to changing needs during that period.

Because child development follows a general pattern (even though the process will vary from individual to individual and culture to culture), it is possible to establish program activities appropriate to general stages or levels of a child's development. These stages correspond roughly to certain age periods, but they are more accurately thought of in terms of particular developmental advances that occur as a child grows older. Very roughly, it is possible to think in terms of programs appropriate to the following developmental stages:

- a prenatal period;
- infancy (up to about 18 months) that encompasses weaning, learning to walk and early language development;
- a toddler and post-toddler period (about 18 months to 48 months) during which a child's coordination, language, ability to think, and social skills advance by leaps and bounds;
- a preschool period (approximately ages 4 and 5) when coordination is relatively well-developed, and when cognitive development and development of pre-literacy skills occur rapidly, along with greater attention to relationships with peers; and

- a period of transition to school and the world at large (roughly ages 6 to 8).

Program responsibility for children in these different stages is often placed in different institutions, with the period prior to age 3 falling to the health sector and/or to organizations concerned with family welfare. From age three onward, child development is more likely to be associated with education and preschools. However, if "learning begins at birth," as stated in the Declaration of the World Conference on Education for All, age 3 is too late. The earlier period should also be a concern **for education**, even if the institutional location lies outside education.

Against this background, we turn now to an examination of evidence of program effects, concentrating on three approaches presented in the framework -- on center-based child care, on parental education, and on child-centered programs of community development.

## V. Evidence of Program Effectiveness

Over the years, a large number of evaluations have been carried out which try to get at the benefits associated with participation in various kinds of early childhood programs in Latin America and elsewhere. A growing number of solid studies provide evidence suggesting that:

- Programs designed to improve health, nutrition and the psycho-social condition of children in their preschool years can affect significantly children's development and their readiness for school.

- These improvements make a child more likely to attend school, less likely to repeat or drop out, and a better performer in school.

- Through reductions in repetition and dropout rates, the efficiency of school systems is improved.

- Effects can favor children who are at a social disadvantage.

- Improved readiness for school does not always translate into improvements in school progress and performance because of the poor quality of primary schools (Therefore, lack of a relationship between early intervention and school variables does not necessarily indicate that an early intervention is ineffective).

- Attention to the quality of early interventions is important, but an obsession with quality is not necessary.

This evidence comes from evaluations of several kinds of center-based programs focussing on the child, from programs of parental education in which the focus is on the caregiver, and from community development programs build around child development. Some of the programs evaluated are health or nutrition programs and others are education programs but most have taken an "integrated" approach which includes several components.

### Effects on Children

*Effects on the development of children and their "readiness for school."* The development of children and their "readiness for school" can be defined in many ways. In the clarifications presented in the prologue to this paper (pp. 2-3), we suggested that it is more appropriate to talk about the general development or condition of children prior to their entrance into school than it is to link that condition specifically to schooling through the use of the "readiness" concept. Nevertheless, in many programs and studies, emphasis is placed on pre-literacy and pre-numeracy skills and on the cognitive development of children prior to their entrance into school. When a broader view is taken, development and "readiness" are also operationalized in terms of physical, social and emotional characteristics, including nutritional and health status, a child's ability to relate to others, and self-concept or self-esteem.

A long list of academic studies and reviews, not linked to particular intervention programs can be cited to support 1) the idea that early childhood development can be enhanced and 2) the position that the early years constitute the key period for the development of intelligence and behavior (e.g., Hunt, 1961; Bloom, 1964; Bronfenbrenner, 1979; Rutter, 1974; Sameroff and Chandler, 1975; Piaget and Inhelder, 1969). It is not our purpose to review that vast literature. Rather, we focus on the benefits to children resulting from specific interventions, concentrating on Latin America, but bringing in results from other countries as well.

Looking across many program evaluations, each with its peculiar definition of the outcome hoped for, there seems to be little doubt that intervention programs of various kinds designed to improve the early development of children, including their cognitive ability, can achieve their purpose[10]. In Latin America, evidence can be found in studies of nutrition interventions (e.g., Klein, et.al., 1979; Chávez, 1981; Cravioto, 1982; McKay, 1982), formal and informal center-based pre-school programs (Filp, et.al., 1983; Myers, et.al., 1985; Instituto de Economía, 1989; Feijo, 1982; Pontiere, et.al., 1981; INAN-MS, Forero and Cuervo, 1987; Llanos, et.al, 1985) home day care programs (ICBF, 1990; de Ruesta, 1978), parental education programs (Richards, 1985; Alvarez, et. al, 1982), home-visiting programs (Llanos and Winkler, 1982), community-development programs (Nimnicht and Posada, 1985; Chetly, 1990). The Latin American results are reinforced by data from programs in other areas of the world (Turkey - Kagitcibasi, et.al., 1985 ; India - Lal & Wati, 1986; Morocco - Wagner and Spratt, 1984; Thailand- Raudenbush, Kidchanapanish and Kang, 1991; Philippines - Child and Youth Research Center, 1988).

Because this evidence is extensive and increasingly accepted, it is not necessary to dwell on it. Acceptance of the well-grounded idea that early development and the ability to learn can be enhanced through interventions will be assumed. Emphasis will be placed, rather on the extent to which these developmental improvements carry over into school, affecting school entrance, progress and performance. The evidence to be provided comes from 19 longitudinal studies from Latin America and elsewhere that have traced students into primary schools following different early childhood interventions. Of these, four are studies of the effects of nutritional interventions and 15 examine educational programs, many of which also include a nutrition and health component. Table 1 provides descriptions of the 19 projects or programs whose evaluations have been included in the analysis that follows. Table 2 focusses on evaluation results. Of the 19 studies, 10 contain comparative information about enrollment, 14 about school progress (promotion, repetition, drop out), and 14 about school performance.

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[10] In "The Eleven Who Survive," we examined 18 evaluations of 15 different projects, all but 4 of which were carried out in Latin America or the Caribbean. These projects differed in their settings, scope, type of delivery, ages of children attended, and stage of consolidation. The projects attended to low-income families, included several components (e.g., health, nutrition and psycho-social components), and involved some form of community participation. In general, the evaluations suggested that early interventions can have positive effects on early development and on the preparation of children for school. In this paper, several studies from that earlier set that traced children into primary school will be put together with others that have come to our attention since, to examine effects of early intervention on the progress and performance of children in primary school.

*Effects on enrollment, progress and performance in primary school.*

- *Effects on enrollment.* Are children who participate in early childhood programs more likely to enroll in primary school? Relatively little information could be found to answer this question. The Guatemalan study showed an effect of the nutrition program on enrollment for girls, but not boys, as indicated above. The PROMESA program in Colombia showed a (slightly) higher enrollment level among children participation in the program. The lack of information about effects on enrollment is understandable for Latin America where enrollment in the first year of primary school is almost universal in most countries within the region.

A more interesting question for Latin America is, "Does participation in an early childhood program effect the age of enrollment?" This question is important because the age of enrollment may, in turn, be associated with effects on progress and performance. Sometimes intervention programs provide the grounding for children and raise expectations for parents so that children enter school at the age that is recommended rather than at an older age, thereby helping to regularize the flow of students into and through the system. However, programs may also lead to pressures to put children into a structured school environment before they are ready.

In six studies, the average age of enrollment was clearly younger for those who had been in an early childhood development program than for those who had not. In only 2 cases where enrollment age was reported were there negligible differences. One does no know from the studies whether an earlier age of enrollment led to improved progress and performance.

- *Effects on progress (promotion, repetition, drop-out).* Three of the four nutrition studies showed an improvement in school progress for program children; one failed to find a difference. Of the 10 education studies including information about school progress, 7 showed less repetition and better progress through school for children who had participated in an early childhood program, as compared with similar children who had not. Three showed no effect, one of which was carried out in a system with automatic promotion so no difference would be expected.

In some cases, the difference in promotion rates was rather dramatic. For instance, in all three of the Brazilian studies, the difference in repetition was substantial. In the CEAPE study, the rate was 26 percent vs. 44 percent in the first grade and only 6 percent vs. 26 percent in the second grade of primary school. The lower rates were for CEAPE participants. In the Alagoas evaluation of the PROAPE program, repetition in the first grade was only 9 percent for the PROAPE children as compared with 33 percent for children who did not participate in the program. Yet another Brazilian study, from Fortaleza, showed a high rate of 36 percent repetition in the first grade for children with a kindergarten experience, but an even higher rate of 66 percent for those without such experience.

Four studies from Colombia are included in the Tables, all of which show significant differences in progress through the educational system. The biggest of these is associated with a program in the impoverished area of the Choco where 60 percent of the program children reached the 4th grade of primary school versus only 30 percent of the comparison group. In Argentina, 36 percent of the rural children from low socio-economic backgrounds repeated if they had a pre-school experience as compared with 77 percent for those without.

In the case of Peru, no difference in repetition was found between children who had participated in the PRONOEI program and children who had not. It was suggested that this finding reflects the poor quality of the primary schooling in Peru rather than the failure of early intervention programs to have an effect.

- *Effects on performance*

*Academic performance.* Of the 14 studies reporting on academic performance, 8 indicated that children from early intervention programs performed better; 5 found a negligible difference or none at all, and in one (Morocco) positive effects were found in a rural, but not an urban context.

In the Turkish and Philippine studies, there was a suggestion that the results were stronger during the first two years of the primary school than later on. What the longer term effects are in these two cases has not yet been determined (the Turkish follow-up is being continued), but if the pattern established in the United States holds, one would expect to find that differences begin to appear again over the years.

*Social behavior, self-concept, and school adjustment.* Information is thin regarding differences in the social and personal adjustment of school children as related to their participation in an intervention program during the pre-school years, particularly in the Latin American studies. The Guatemalan nutrition study demonstrated that program children who received high caloric supplementation from birth to age 2 years had higher levels of social involvement than unsupplemented children. The CADEL evaluation in Chile did not find a difference.

Outside Latin America, the Turkish study found that adjustment was better among children whose mothers had participated in a parental training program, but there was no difference in adjustment according to whether or not a child had been in a preschool center or not. The Philippine study found significant differences in the social adjustment of children who had come from the Early Childhood Enrichment Program, as compared with those who had not. Both Indian studies indicated better deportment among program children than among non-program children.

# Table 1

| Country/ Intervention | Urban/ Rural | Age of Children | Study Population | Intervention Components | Comparison Groups |
|---|---|---|---|---|---|
| Colombia, Bogotá (Herrera, 1983) | Urban Marginal | Pre-Natal. 3 months at outset followed to age 7 | 443 Families | All groups received health care. Nutrition supplementation, different ages. Home visits for subgroups. | Random assignment to treatment groups: 1. Suppl. Nutr. - mother. 2. Suppl. Nutr. Child - 3 mos to 3 yrs. 3. Early Stim. - Birth to 3 years. 4. Early Stim. and Nutr. Combine 2+3. |
| Colombia, Cali (McKay, 1982) | Urban Marginal | 3-7 | 333 Children, malnourished, low income | Pre-schooled. Nutrition supplementation. Health Surveillance/Care. H/N Education. | Random assignments to: 1. 4 yrs begin age 3. 2. 3 yrs begin age 4. 3. 2 yrs begin age 5. 4. 1 yr begin age 6. ALSO: 5. No treatment low income group with normal weight/hgt. 6. No treatment, high income. |
| Guatemala, INCAP (Klein, 1979) | Rural Four villages | Pre-Natal 6 mo. at outset | 671 Children (450 followed longitudinally) | Nutrition Supplementation. (6 mos. to 7 years). | Two villages: high protein and high calorie supplementation. Two villages: no protein, modest calorie supplementation. |
| México (Chávez and Martínez, 1983) | Rural One village | Pre-Natal (followed for 10 years) | 34 Children | Nutrition supplementation to mother during pregnancy and lactation. Supplementary feeding of baby from approximately 3rd month. | Control (n=17) pregnant women who were well, normal hgt., and between 18-36. Selection of children born with 2.5 kg or more and APGAR of 8. intervened (n=17). Matched group, a year later. |
| Turkey Comprehensive Pre-school Education Research Project (Kagitcibasi, 1987) | Urban | 3-5 | 251 Children | Maternal education using Turkish adaptation of HIPPY, preschool educ. vs custodial care vs home care. | Children in same neighborhoods matched on age, economic and family criteria who did not attend pre-school. Trained vs untrained mothers. |
| India Integrated Child Development Service (ICDS): Dalmau Project (Chaturvedi, 1987) | Rural | 0-6 | Children ages 6-8 in primary school 214 ICDS 205 non ICDS | Nutrition supplementation. Immunization, health checkups, health/nutrition. Education, non-formal pre-school education. | Children in adjoining area not participating in ICDS but similar in socio-culture, geographic, anthropological features. Villages within area selected randomly. |
| India, ICDS Haryana State (Lal & Wati, 1986) | Rural | 0-6 | Primary school: 1,271 ICDS 436 non-ICDS | Same as above. | Children from same area who did not participate in IDCS. |
| Morocco Literacy Acquisition Research (Wagner, 1984) | Urban and Rural | 5-7 | 378 Children | Quranic or "modern" preschooling. | Children in Quran pre-schools compared with children in "modern" pre-schools and non pre-school group. Sample constructed to control for social class. |
| Latin America, 4-country study in Argentina, Bolivia, Chile, Colombia (Filp, 1983) | Urban and Rural | 4-7 | 2,545 Children | Pre-school. | 1st grade children who had participated in pre-school vs non pre-school (taken from same/other last grade classes, same schools). Analysis within SES grouping. |
| Brazil, Fortaleza Pre-school Research (Feijo, 1984) | Urban | 6-7 | 127 Children | Public kindergarten participation. | Children who tried to enroll in same kindergarten but couldn't due to space, matched by gender, birth order, siblings. |
| Peru, non-formal Programme of Initial Education (PRONOEI) (Myers, 1985) | Urban and Rural | 3-5 | 334 Children | Non-formal pre-school. Nutri. suppl. Community improvement projects. | Children in non-PRONOEI villages with partial attempt to match on SES status. |
| Chile, Osorno Parents and Children Project (PPH) (Richards, 1985) | Rural | 4-6 | Children in 52 communities | Health/nutrition education. Child development education. Community development. | Children in same class who did not participate in PPH. |
| Colombia PROMESA (Nimnicht, 1986) | Rural | 0-7 | 4 communities | Health/nutrition/child devel. education. Early stimulation programme. Community improvement projects. | Children from same communities who did not participate in PROMESA. |
| Brazil, Alagoas PROPAPE (Min. Saude, 1983) | Rural | 4-6 | 184 - PROPAPE; 556 -CASULO; 320 - KINDERG; 334 - No preschool | Health surveillance. Nutrition supplement. Pre-school. | Comparisons among children from different pre-schools with non pre-schoolers in first grade. |
| Philippines, Early Childhood Enrichment Program (ECEP) (CYRC, 1988) | Urban and Rural | 0-6 | Pre-test 8,842 Post-test 4,875 Follow-up = 660 | Cognitive enrichment in centers or in homes. | ECEP vs non-ECEP children with similar "disadvantaged" characteristics. ECEP + "other pre-school" vs non-ECEP. |
| Brazil, São Paolo, (CEAPE) (Pontieri et al., 1981) | Urban | 4-6 | CEAPE - 268 No-CEAPE - 268 | Cognitive enrichment. Nutrition. | CEAPE vs non-CEAPE children from same community. |



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# Table 2

| Country/Program | Enrollment | Progress | Performance |
|---|---|---|---|
| **A. NUTRITIONAL INTERVENTIONS** | | | |
| Colombia, Bogotá | Suppl/home visit: Ave. age of enrollment: 5.6 yrs; Control: 6.0 yrs | Repetition: Treatment 4%; No-Treatment 13% | Teacher assigned grades. No difference (1st grade). |
| Colombia, Cali | | Ave. grade level in 4th yr: Experimental 3.2; Comp. .9 | |
| Guatemala | Earlier for supplemented. | No effect. | Acad. perform: no effect. Social interact.: pos. effect. |
| México (Chávez) | All enrolled. | Repetition (1st gr): Treatment 0.0%; No Treatment 35% | Significant differences found in: • school exam/ • national exam • Detroit-Engle test/• behavior obs. |
| **B. EDUCATIONAL STUDIES** | | | |
| Turkey, Comparative Pre-School Research Project | | | Performance in Grade 3<br>Maternal Custodial vs home: 1. School Grades +; 2. Behavior; 3. Achieve test +; 4. General abilities<br>Maternal Educ. vs No Mater. Educ.: 1. School Grades +; 2. Behavior +; 3. Achieve test +; 4. General abilities + |
| India (Dalmau) | Entrance by ICDS at earlier age (85% vs 74% by age 6). Only significant for girls. | Regular attendance for ICDS (88% vs 74% had average or above attendance record) | 1. Scholastic performance based on teacher ratings favored ICDS (90% vs 76% rated average or above)<br>2. Behavior: 93% vs 81% rated average or above. |
| India (Haryana State) | Right age for grade: ICDS / Non-ICDS<br>Lower caste 80 / 56<br>Middle caste 75 / 56<br>Higher caste 82 / 59 | Dropout by grade 3: ICDS / Non-ICDS<br>Lower caste 19 / 35<br>Middle caste 5 / 25<br>Higher caste 7 / 8 | 1. Teacher classification: "Overwhelming majority of the children in top 10% & 20% were those who had 2-3 years of exposure ... to Anganwadi... Attention span and retention power was superior." |
| Morocco | | No difference in promotion rates. | 1. Achieve test (grade 1): + for Qursanic in rural areas. + for "modern" in urban areas. No diff. for Qursanic in urban areas.<br>2. General abilities test |
| Argentina (4 country study) | Lower age of enrollment (all social classes, urban and rural, especially low SES/rural). | Repetition (1 yr): Preschool / No Preschool<br>Low SES/urban 12% / 27%<br>Low SES/rural 36% / 77% | Reading/writing ability significantly higher for pre-schoolers (except for urban marginal children). |
| Bolivia (4 country study) | Negligible difference. | | Reading/writing ability: negligible effect. |
| Chile (4 country study) | Lower age of enroll. (all social classes) | No difference. | Reading/writing ability: negligible effect. |
| Colombia (4 country study) | Repetition: Preschool / No Preschool<br>Low SES/Urban 10% / 22% | No difference. | Reading/writing ability: negligible effect. |
| Brazil, Fortaleza | | Repetition yr.1: Kindergarten 36%; No Kindergarten 66%<br>(girls benefitted most) | |
| Perú (PRONOEI) | Lower age of enrollment. | No difference in 1st or 2nd grade promotion rates (Myers, et al.). | No difference in grades or on results of special math/language ability test (Aliaga). |
| Chile (PPH) | | | Grade 1: teacher rating +; Draw-a-man +; Parental assessment + (71 vs 39 rated as good) |
| Colombia | Enrollment in 1st Grade: PROMESA 100%; No PROMESA 87% | PROMESA / No PROMESA<br>Reached Grade 2: 83 / 77<br>Reached Grade 3: 73 / 44<br>Reached Grade 4: 60 / 30 | |
| Brazil, Alagoas | | PROAPE / Non-PROAPE<br>Dropout Grade 1: 18 / 14<br>Repetition: 9 / 33<br>Dropout + Repet.: 27 / 47 | |
| Philippines (ECEP) | | | Overall Acad Ach: Grade 1 +; Grade 2 +; Grade 3 0<br>English: Grade 1 +; Grade 2 +; Grade 3 +<br>Pilipino: Grade 1 +; Grade 2 +; Grade 3 0<br>Math: Grade 1 0; Grade 2 +<br>Civics: Grade 1 +; Grade 2 +<br>Char. Bldg.: Grade 1 +; Grade 2 +<br>Social Maturity: Grade 1 +; Grade 2 + |
| Brazil (CEAPE) | | Repetition: Grade 1 / Grade 2<br>CEAPE 26% / 6%<br>non-CEAPE 44% / 26% | BEST COPY AVAILABLE |

With the accumulation of evidence that has appeared over the last 10 to 15 years, the main question no longer is whether effects on the development of children and on their "readiness" for school can be obtained, or even whether it is possible to improve school performance as a result of early interventions. More important are the following questions:

- Which children benefit most from intervention programs?
- In what kinds of programs and under what conditions do effects occur (the expected results do not always occur)? and
- At what cost?

*Which children benefit most?* Let us consider three characteristics of children that might be associated with differential outcomes: gender, age, and socio-economic circumstances.

- *Gender.* Are programs equally effective for girls and boys? In the Latin American studies cited above, there does not appear to be a significant difference between boys and girls in the effect of programs on readiness for school, measured in different ways. Although there may be particular conditions and outcome measures for which there is a difference, this is not a common occurrence. In at least one study (Klein, 1979), it was found that the expectations of parents regarding the education of their female children were raised considerably so that the program resulted in increased school attendance for girls, but this was not linked to a difference in the direct effects of the program on boys and girls. In other parts of the world, it may be that differential effects, favoring girls who are more disadvantaged, will be more prominent (e.g., Lal and Wati, 1986).

- *Age.* One of the dimensions of the program framework presented earlier was an age dimension linked to developmental changes through which a young child passes. Are interventions more effective for younger (before age 3) or "older" (ages 3 to 6) children?

Evidence suggests that important advances in early development, building toward readiness for school and life's many demands, can result from programs at any and all of the different age levels. At each developmental stage, different activities are required and different results expected, making comparisons difficult. It is difficult, also, to make links between interventions in the very early years (0 to 3) and progress and performance in schools because other factors intervene. It is difficult, therefore, to say that investment in a program directed to any one age will be more effective or more beneficial than at another. From a broad developmental standpoint, and thinking in terms of life skills and of prevention rather than of "cure," a strong case can be made for earlier rather than later interventions, but hard program evidence to sustain this position is scarce.

- *Social and/or economic disadvantage.* Are preschool programs only for the advantaged who already have a certain base for learning and therefore will be able to benefit? Or can disadvantaged children also benefit?

The Head Start program in the United States took its clue from research indicating that disadvantaged children could benefit from early interventions (Hunt, 1961; Bloom, 1964). Evidence from the evaluations of US programs strongly bears out that position (Berruta-Clement, et. al., 1984; Lazar and Darlington, 1982). And yet there is a tendency in some countries and organizations to shy away from early education programs as general social investments because they are thought to benefit mainly the rich.

This crucial point turns on differences that are related to biases in present program coverage and quality that too often favor the already favored. For instance, a recent article reporting results from Thailand (Raudenbush, Kidchanapanish and Kang, 1991) suggests that the pre-primary sector there magnifies rather than reduces differences between the advantaged and disadvantaged in educational attainment because: 1) pre-primary programs are found disproportionately in urban areas and 2) programs for the more disadvantaged sectors tended to be of a lower quality. It is important not to take this description of the **actual** situation, with its biases, as indicative of the **potential** relative effects of early interventions on different economic or social groups of children. Indeed, the article concludes that,

> "... these data ... suggest that student achievement can be boosted by expanding access to pre-primary schools or by increasing the duration and instructional effectiveness of existing pre-primary programs. We expect that such changes, **if targeted to rural areas, and areas with large poverty concentrations**, would also reduce inequalities in the distribution of student achievement." (p. 271, emphasis added)

There is evidence from Latin America (Filp, et.al., 1983; Myers, et.al, 1985) that children who are at a disadvantage can not only benefit, but that they may be able to benefit even more than their more privileged peers from programs of early childhood development. This idea is supported by findings from other parts of the World (e.g., India - Lal and Wati, 1986).

In brief, if a goal of early education programs is to help to even out social differences, then extra care must be taken to be sure that programs are directed specifically to disadvantaged groups. And, care must also be taken to see that the quality of the programs provided is good.

*Program Characteristics?* In general, the evidence is strongest for smaller experimental programs, suggesting that more intensive, "hot house" treatment produce the best results. The smaller more experimental programs are characterized by: higher quality, more intensive inputs, and a multi-faceted approach.

But improved readiness is found also in evaluations of larger scale interventions such as the PRONOEI in Peru (Myers, et.al., 1985) and the Colombian home day care program (ICBF, 1990). These are public programs that are not of as high quality as most pilot programs, and they are run by para-professionals with relatively little training. And both involve a reasonable level of community participation.

Evidence from the Third World does not allow us to say much about the effect of different curricula that are being used in early education programs. Evidence from the United States and England suggests that the specific curriculum used is not the most important variable as long as the application is consistent and of good quality. In a study by Osborn and Milbank, the authors concluded that, "...provided the child receives proper care, has interesting activities and other children to play with (which are common elements in the majority of preschool institutions) the actual type of preschool experiences matters very little," (1987, p. 239).

*Program cost.* Only rarely have effects been related directly to costs in a way that would allow informed judgements about the cost-effectiveness of programs. We have argued elsewhere (see "The Eleven Who Survive") that because early childhood development programs have such different goals and apply such different methods, most cost comparisons between programs are misleading. We have argued also that the cost of early childhood programs can be low. For instance, the cost per child per month to the government of the home day care program in Colombia is estimated at about US$13, or about $156 per year. This compares with a minimum salary figure of about $110 and a GNP per capita of about US$1200.

In study of the Peruvian PRONOEI, the per child per year cost (covered by governmental and international resources) in the state of Puno was about US$28. If that is compared with the prevailing minimum wage at the time, the cost is about 1/14th of a minimum wage. If we make the comparison with the GNP per capita, the costs ratio is about 1 to 40.

However, the main point is not how low the cost of a program can be; rather it is how effective a program is for a given cost in a particular setting. In the case of the PROAPE project in Brazil, the reduction in school repetition associated with participation in the project was costed. When that was done, it was found that:

> "The total cost of schooling (including preschool PROAPE services) per second grade graduate was about US$50 (or 11 percent) less for students who had been in the PROAPE program than for those who and not been in PROAPE." (Berg, p. 58)

Another evaluation of the same program (the evaluation included in Tables 1 and 2) it was found that:

> "The average cost per child of producing a first grade graduate is at least US$41 less for PROAPE children than for children without preschooling. This per child savings is higher than the PROAPE cost of US$28. In these terms, the PROAPE program not only paid for itself but resulted in a primary school cost saving in the first year over and above the cost of PROAPE." (Calculations presented in Myers, 1992, based on Ministerio da Saude, 1983)

**Effects on Caregivers and Families**

Most early childhood programs fail in their evaluations to consider benefits that accrue to caregivers and family members other than young children as a result of participation in the program. However, these benefits can be large and important from both personal and social standpoints. They include changes in skills and abilities (which can be more generally applied), changes in confidence, a sense of personal satisfaction, and changes in employment and/or productivity.

An example of these kinds of changes comes from Turkey and the project described in Appendix A. In this case, the mothers who participated in the training program were more optimistic and likely to share in decisions and activities with their spouses. This change was evident when a comparison was made to their previous outlooks and actions, and when program mothers were compared with those who had not participated. (Kagitcibasi, 1987)

**Effects on Communities**

*Social organization.* Many examples can be cited of cases in which programs of early childhood care and development have brought major improvements in community organization. This is often a result of the need to organize some kind of committee in the community to oversee the program.

- In Peru, in the PRONOEI program, parents committees provided a new opening for the participation of women in community activities (even though it did not change the underlying social structure in the community).

- In Northern Colombia, dramatic changes occurred in communities along the coast as an early childhood program took shape. (Chetley, 1991)

*Services.* When health services or agricultural services, or sanitation arrangements are strengthened in a community as a result of actions motivated by a desire to improve early childhood development, the results will be of benefit to the community as a whole, not just to the children. This point may seem obvious but is often overlooked, in part because early

childhood development programs are defined narrowly as education programs for young children rather than in the broader integrated perspective we have taken in this paper.

- In the PROMESA project in isolated communities along Colombia's Pacific coast, a host of nutrition- and health-related activities were carried out under the project, both at the initiative of the community participants and as a result of attracting government services to the communities.

*Employment.* Early childhood programs can provide employment in communities, not only to the specific people who care for the children, but also through the procurement arrangements that are set up on relation to the program. Perhaps the best example of this comes from the Colombian program of home day care in which there now 50,000 women employed to operate the centers in their own homes.

**Effects on Institutions**

*Efficiency.* It should be clear from the above description of the differences in age at entrance and in promotion and repetition rates that early childhood programs can have a marked effect on the efficiency with which school systems operate.

*Effectiveness.* Similarly, the effectiveness of institutions seems to be enhanced in many cases because the performance of children is higher in those schools. The idea that better prepared children will enhance school effectiveness is slowly being recognized.

**Social and Economic Effects**

*Narrowing social gaps.* It would be too much to expect that early childhood programs can have a major impact on existing social gaps. However, in combination with other programs it does seem clear that such programs can help to moderate differences. Some evidence to that effect was provided above, with respect to socio-economic status, caste, and gender.

*Fertility.* To the extent that early education leads to improved levels of education, particularly among women, it will have an inter-generational effect also on the number of children born, given the well-established relationship between women's educational level and fertility.

## VI. Towards a Child Development Strategy for Latin America

The specific child development strategy that will emerge for each country is likely to be different. Children's needs vary with differences in geography and in economic, political, social, and cultural conditions. Laws, infrastructure, the availability of human resources, and the level of program experience vary from place to place. In short, there is no magic formula to be applied regionally.

These differences notwithstanding, there are several general lines of action that can be followed when shaping a strategy intended to reorient and strengthen programs of early childhood care and development, whether in the region, in particular countries, or in agencies, such as the World bank. These include: carrying out a broad assessment; strengthening, extending and/or integrating existing programs; developing new initiatives to respond to unmet needs; mounting training and communication programs in support of programming; seeking collaboration among governments, non-governmental organizations and communities; and supporting program evaluation. Each of these actions will be discussed briefly in the following paragraphs.

### Assessing the Situation

It may seem obvious that the search for a sound program strategy in any country should begin with a careful and comprehensive assessment of the condition of children, and of conditions and existing programs that directly or indirectly affect child development. On the other hand, it is argued sometimes that we already have enough diagnoses and that additional assessments are just excuses for failure to act. Indeed, most governments have active planning offices that ar involved in continuous assessments of diverse kinds. Sectoral assessments of one kind or another abound. In conjunction with UNICEF, most countries carry out a "Situation Analysis" periodically. In most places, then, assessing the situation does not require starting anew as much as it requires assembling existing information within a comprehensive framework allowing a broad view of the situation.

Existing diagnoses of the situation of children tend to be characterized by a limited viewpoint, focussed on a particular age (e.g., children age 5), with a particular approach in mind (e.g., center-based pre-schools) and from the viewpoint of a particular sector (e.g., education). Children are broken up into bureaucratic pieces inhibiting an integrated and holistic view that is needed when approaching early childhood development. A more comprehensive view will: 1) look across the age span from conception to about age 7 or 8; 2) cut across sector divisions; and 3) consider a range of complementary approaches to child development, including center- and home- and community-based program approaches. In Section IV (Figure 2, p. 16) a framework was suggested to help organize a broad diagnosis.

Looking across the Latin American region, several general observations can be made about assessments and about the programs that follow from such assessments. These observations are intended to alert those charged with assessment to common gaps or failings.

- *Most assessments take a sectoral view*; moreover, most are done from either a health perspective or an educational perspective. There is a pressing need to bring these together.

- *Health assessments tend to concentrate on children from conception until age 2.* Most education assessments tend to concentrate on children from age 3 to 5. Little attention is given to mental and social development of children in the earliest months and years.

- *Assessments of existing programs concentrate on major governmental programs and on more formal programs.* They do not necessarily pick up initiatives that are being carried out successfully by communities or non-governmental organizations and/or that are "non-formal" because they are organized outside a formal bureaucratic system. They seldom incorporate information about the childrearing practices and beliefs of the population even though they have a greater influence on the general developmental status of children than institutional programs.

- *There is a tendency to look for deficiencies and to overlook positive elements* that can be built upon, in existing programs or in the practices of the people. To incorporate this kind of information, a diagnosis should draw not only from health and education and nutrition studies, but should also include both a review of anthropological studies and should involve members from different cultural groups in the process of assessment.

**Strengthening, Extending and Integrating Programs**

In the following paragraphs, a number of approaches will be offered to strengthening programs for early childhood care and development. The first set of suggestions groups together programs that, from the beginning, were created with the idea that an integrated approach should be taken. These suggestions include both center-based programs and parental education programs. They include examples in which program responsibility is placed with education, with nutrition, and with social welfare. But equally important are examples of programming for early childhood development that begin with existing programs within a particular sector and add additional components to create an integrated child development program. Examples of what might be done in this line are presented that build an early childhood component into existing education, health and nutrition programs. A third set of possibilities arises in conjunction with programs that cut across sectors but that do not explicitly incorporate an early childhood component.

**Integrated Programs of Early Childhood Development**

- *Center-based programs.* A number of programs exist in Latin America that illustrate innovative efforts to create center-based programs with education, health and nutrition components combined:

    - In the community based and predominantly rural PRONOEI's in Peru, approximately 30 children are brought together and cared for five mornings of the week by an educational promotor chosen by the community, assisted by mothers

who cook a morning snack. This program is located within the education sector, but brings in nutrition and health, and sometimes includes income-generating projects as well.

- The PROAPE model in urban Brazil brings together about 100 children, attended by a formally-trained pre-school person assisted (in one variation) by six parents of participating children on a rotating basis. The program, which includes pre-school education, nutritional supplementation and health checks and referrals, came under the supervision originally, of the National Food and Nutrition Institute and the Ministry of Health.

- Home day-care centers in Colombia were created in which a neighborhood mother takes approximately 15 children into her converted home. She is assisted daily by one parent, on a rotating basis. The program is located administratively within the Family Welfare Institute and includes components of education, health and nutrition. (See Box number 1.)

- *Parental education programs* that help parents gain confidence over time and develop skills that will improve their ability to interact with the child and lead to more general improvements in the environment in which a child grows and develops (Bernard van Leer Foundation, 1986; Myers, 1992, Chpt. 7). Emphasis should be placed on bringing parents (and other caregivers) together so that they enrich their understanding and so that they provide support to one another. This can be done in conjunction with center-based programs or as a separate activity. An important part of such programs may be a social communications component but that component should not be divorced from group discussion. Examples:

  - The PEFADI program in Colombia (in which community promoters call groups together for discussions based on a set of themes for discussion).

  - The Peruvian "Portage Project," (a home-visiting model, validated in both rural and urban areas).

  - The Mexican program of Parental Education (see box Number 2).

**Integrating Child Development into Education, Health, Nutrition and Multi-Sectoral Programs**

1. *Within the education sector.*

- *A child-to-child component* should be included in primary education programs. In this type of program, primary school children (who will all too soon be parents) are provided, through the curriculum, with information about health, nutrition, and psycho-social development of young children which they apply in working with (playing with) younger, pre-school aged children.

The Colombian program of "Homes for Well-Being" is a community-based, non-formal program providing attention to children ages one to seven by community day care mothers in groups of up to 15 children. Since its inception in 1986, the program has expanded to cover (1991) approximately 800,000 children, with a target of 1.5 million children. Care is usually for 8 hours per day in the home of the day care mother and consists of providing children with the conditions necessary to foster their health and their physical, psychological and social development. Each community day care mother receives training in the care and development of children as well as in family and community relationships and in nutrition and health. She is assisted, on a rotating basis, by women whose children are cared for in her home. Nutritional supplementation for the children. Day care mothers are provided with small loans to be used in upgrading their homes.

Community members participate in an initial analysis of the communities needs for services, determines the number of day care homes to be set up and selects local women to become home day care mothers. Local management are established which are responsible for purchases and payments to the community mothers. Children are given "scholarships" which are used to pay the home day care mother.

A major share of the funding the coordination of the program falls to the Colombian Institute of Family Welfare (ICBF), with additional responsibilities shared with the Ministry of Public Health, the National Apprenticeship Service, the Institute of Territorial Credit, and other governmental and private organizations.

While meeting directly the care and development needs of the children, the program seeks also to improve the economic base of a community by providing paid employment to neighborhood caregivers, by freeing other women to seek (or upgrade their) employment and by directing funds to local business for economic activities related to home day care.

Box 1

- *Literacy and adult education programs*. The content of literacy programs can be directed in part toward topics that will affect the development of very young children. The fact that a large number of participants in literacy programs are women, to whom societies continue to assign the primary role in caregiving, makes this approach even more attractive.

  Parental education programs could be funded either under "initial education" as presented above, or could be funded as a part of adult education programs.

In 1982, a national program of non-formal education of parents and community members was launched by the Secretary of Public Education, oriented towards low-income families with children ages 0 to 4 residing in poor rural and urban marginal communities. The objective of the program is to educate and "empower" parents to improve their care of, and interaction with, their children. On the average, the program has reached about 200,000 children each year through their parents."

The Mexican program of parental education rests upon a system of successive training in which professionals contracted by the SEP work together with state personnel to train supervisors who in turn train up to ten module supervisors, who then train and supervise up to 10 local promoters, or "community educators." The community educator, works with groups of 20 parents, organizing a group orientation at the outset and 40 group meetings during the year during which parents discuss ideas presented in a "Parents Guide." Group meetings are backed by periodic home visits. Community educators are "volunteers" who live in the community and who rely on the community for organization and support and who are given a gratuity for their service.

In 1992, conversations are being held between the Mexican Government and the World Bank to work out a loan that would strengthen and extend this program.

**Box 2**

- *Teacher training.* Within programs of support to improve the quality of teacher training, an early education component could be included to improve the professional capacity of early educators and to provide them with an orientation to non-formal as well as formal programs. In some cases, the teacher training begins (or even ends) in secondary school. One line of activity in these programs could be an early education line (as is done in China, for instance).

- *Technical training.* Most technical training programs are thought of in terms of employment and of skills that contribute directly to improving the ability to work in such fields as carpentry or computer programming. These programs are justified in terms of their potential contribution to production and in terms of their employment potential. Less attention has been given to skills that might be used in services that are related to the production of human resources. The opening market for early childhood care and development in many places (including home day care centers formed as part of a large public program or as a private initiative) suggests a line of technical training that could be considered in technical training loans.



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The Jamaican Child-to-child program, directed to children ages 9 to 12, who are often, at one and the same time, caretakers of younger siblings, future parents, communicators of information to their parents and other caregivers, and community members capable of improving conditions affecting survival and development.

The program began on an experimental basis in 1979 in one rural primary school, at the initiative of the Tropical Metabolism Research Unit of the University of the West Indies. It was then extended to 14 schools and an evaluation was carried out which showed the program to be effective and well-received. Children improved significantly in their knowledge of all areas covered by the program. In addition, the knowledge of parents improved as did their encouragement and support of play with younger children. Teachers also imported their knowledge of health and development and were introduced to new forms of teaching. Subsequently, child-to-child methods and material have been incorporated into the regular primary school curriculum for the entire country.

The child-to-child curriculum provides information about health, nutrition, psycho-social development and dental care. Among other things, children are taught how to encourage a younger child development through attention to health and nutrition and through play. An action-oriented curriculum includes role play, group discussions, demonstrations, toy-making, drama and song. Most of what is imparted in a child-to-child program was already contained in a primary school curriculum. However, the Jamaican program showed that adding some emphasis, relating the knowledge to activities, and presenting materials in a new, interesting and participatory way can bring major benefits.

Box 3

2. *Within health and nutrition programs.*

Within the broader definition of survival that is evolving and within the increasing attention begin given to growth and psycho-social development, it makes sense to consider ways in which child development can be incorporated into on-going health and nutrition programs. Usually, this means incorporating a piece that will strengthen attention to psycho-social development because physical development is already being attended to in such programs. The process of integrating this component into health and nutrition is not likely to cost a great deal. This very fact may mean it is overlooked when, at a low marginal cost, it could improve attention to physical health as well as improve the general welfare of the child.

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- *Programs focussing on improvement of health services.*

  - *Training.* Perhaps the most important way in which a broad view of child development (including mental, social and emotional as well as physical development), can be incorporated into health programs is by reorienting the training of personnel. In many health loans, a training component is included. Attention should be given to ways in which training curricula, materials and contracted staff can include a psycho-social developmental component. Experience in Thailand could be used as a model.

  - *Maternal and Child Health Care.* MCH programs often do, but always should, include attention to the psycho-social well-being of mothers and children. The periods of pregnancy and lactation are two periods when women not only need medical supervision and advice, but also need strong social and psychological support. These are also times when women, and families are very open to learning about child care and development. Examples of specific activities include:

    - Introducing the monitoring of psycho-social health into the general process of monitoring health and nutrition and into statistics that are produced as a result. (This is being done in Chile and in Colombia)

    - Introduce measures that facilitate the early interaction and attachment of the child to the mother, at birth and in the neo-natal period. This may involve simple inclusion of information about the nature of the child at birth (e.g., the state of development of its senses) or the use of the Brazleton technique for evaluating babies, with mothers present (as was done in Venezuela within the Proyecto de la Familia), so they can see the possibilities open for interaction, or it may mean considering a reorientation of current birthing practices that do not permit immediate contact of the mother and the baby.

  - *Health Education.* Health education takes many programmatic forms and is carried out in hospitals and primary health care centers, in schools and programs of adult education, and with the population at large through campaigns using the mass media. Care should be taken to see that health education includes a psycho-social component as well as information about how to avoid or treat diseases.

  - *Home visiting.* In places where a home visiting system is being developed or is in place, the psycho-social development component can be incorporated into the work of the health visitor or promotor. This need not be done initially because it can over-burden a health worker at the outset, but as a visitor becomes more familiar with what needs to be done, it is possible to include an orientation to mental and social development into the visitor's routine. Jamaica provides an example of this approach.

- *Programs focussing on nutrition.*

  - *Food supplementation.* When considering the delivery mechanism to be used for providing food supplementation to young children, it may be possible (and advisable) to consider delivery in relation to existing programs of child care or early education. In the CEAPE and PROAPE projects in Brazil, an early education structure was created that would provide integrated attention to children, but the point of departure for the projects and the related loans was improving the nutritional condition of children. Similarly, the present program in Colombia for improvement of day care homes is fundamentally a nutrition loan concerned with how food is provided to the children in the program.

  - *Growth monitoring.* When nutrition programs support a growth monitoring activity, it is possible to incorporate a psycho-social component into such programs, taking advantage of the fact that caregivers gather together periodically for weighing. In Indonesia, this has been done and is supported by a home visiting program as well.

  - *Nutrition education.* Another component included in some nutrition programs is nutrition education. For the most part, nutrition education focusses on diet, i.e., on what children should be fed. However, feeding should be treated as a social process as well and attention should be given to how children are fed. In so doing, a psycho-social component affecting development would be incorporated into nutrition.

  - *Promotion of breastfeeding and proper weaning.* In breastfeeding, a natural combination of a nutritional and psycho-social action occurs. Both of these features can be promoted; campaigns that might be funded within a loan agreement should include information about the importance of breastfeeding in the process of developing emotional security as well as in gaining weight and preventing disease.

- 3. *Within multi-sectoral programs.*

It may be easier to integrate various components affecting early childhood development into programs that are not attached directly to education or health or nutrition, but that cut across these sectors. For instance:

  - *Social development programs.* In a recent loan made by the World Bank to Venezuela, attention to early childhood was incorporated into a broader social development program. Here, support was related to improvements in the "targeting" of food support and to improvements in the quality of both formal and non-formal preschool options.

  - *Urban and social development.* Integrated urban development programs can easily include support for day care facilities. However, a broader view might be taken in which integrated attention to children, directed at improvements in their survival, growth and development could provide an "entry point" for activities that would be of

benefit to urban communities at large. The same could apply to integrated programs of rural development. Rural extension services can play an important role in early childhood development through their home-visiting programs and home economics branches. The Philippines provides an example within its Early Childhood Enrichment Project.

- *Women in development programs.* Another way in which early childhood care and development can be integrated into programming is in relation to the many women's programs that have grown up over the last two decades. Child care is intimately linked to women's work. (For an excellent discussion of this topic, see: Landers and Leonard, 1991.)

**Emphasizing Training and Communication Strategies**

Within the various kinds of programs selected for support, a sound strategy of early childhood development must pay special attention to training and communication components, no matter what the differences are from county to country. As suggested above, a comprehensive strategy will consider training and communication related not only to formal, center-based institutionalized programs but also to non-formal programs and to programs of parental education. Special attention should be given also to training and communication strategies as forms of fostering integration among programs in the various fields that impinge upon development.

*Training.* Training is crucial to reorient many individuals and institutions to a broader, more integrated view, as well as to provide project implementors with higher level skills. Providing support for training at initial stages in the development of an early childhood program carries with it the advantage of avoiding support for recurrent expenses that a government will, later, have to pick up (but may not be willing or able to do) from its own budget when the loan period is completed. This report does not try here to detail the many forms of training that might be incorporated into a program. These will obviously vary with the context and with the nature of the project.

*Communications.* It has been increasingly common to point to the important role that the mass media can play in programs of many kinds, including those directed toward improving early childhood development. Indeed, a communications program, including use of the mass media, but calling also on many traditional forms of communication, will be important in many early childhood development projects. Communications strategies will be part of the general process of creating awareness in the public at large and among those concerned with the project, and as part of the specific process of educating parents and other caregivers.

**Thailand:** Integrated Nutrition and Community Development Project. Analyses by the ministry of health in Thailand pointed to three major constraints to significant reduction in the level of protein energy malnutrition in infants and preschool children; 1) the inadequate coverage of the health system, 2) the lack of community awareness of the problem, and 3) the inadequate multi-sectoral input to the nutrition program. Accordingly, the government, in 1979, introduced a program of community-based primary health care together with a program of growth monitoring, accompanied by a supplementary food program and nutrition education, all within a national plan for poverty alleviation. Within this broad framework, the Institute of Nutrition of Mahidol University carried out a nutrition education project that was directed toward families with the most vulnerable infants and preschoolers. An important part of that nutrition education was a psycho-social component focussing on caregiver-child interactions and on improvements in the physical and social environment surrounding the child.

As a basis for the project, childrearing attitudes and practices were studied and a number of nutritional practices and social taboos were discovered that were not beneficial to the child. For instance, a misbelief about colostrum and early suckling was associated with failure to begin breastfeeding immediately following birth. In addition it was found that few mothers recognized the visual or auditory capacities of a baby at birth. Babies were kept for long hours in closed cradles. Mothers displayed little awareness of their own capacity to make a difference.

With these practices in mind, a series of five interactive videos was created, one of which was specifically oriented toward creating maternal awareness of her child as an individual with early perceptual ability and at recognizing the importance of play and mother-child interaction in that play as well as in feeding. Health communicators in each village, who also served as distributors of food, were trained in the use of the videos which were presented several times in each village.

On the basis of interviews with mothers of the under-two children, and of observations in the home, evaluators of the project concluded that maternal knowledge and attitudes improved as a result of the process. Also, more colostrum was given. More open cradles were found. Mothers recognized sensory abilities in their children.

The results suggest that visual messages provided in a way that permits discussion can bring about significant changes in childrearing practices and attitudes. The project also illustrates how both nutrition and psycho-social education components can be incorporated into a national program of growth monitoring and targeted supplementary feeding, using a method that does not depend on literacy and taking into account local practices.

What remains to be understood when considering communications approaches is that

> "....even where the mass media are culturally relevant – and in much of Latin America this is far from being the case – individuals exposed to this approach remain passive receivers rather than active participants. The phenomenon then becomes a new version of the 'opiate of the masses' in **telenovela** form." (Bernard van Leer Foundation, 1986)

Rather, the communications media, of all kinds, should serve as a support to educators and promoters, helping them carry out a strategy of working in groups, with parents, and other caregivers and interested members of the community, to create awareness, impart and exchange knowledge, and build organization transcending the particular topic and project and helping to giver permanence to actions taken within the project.

As with training, this report does not pretend to enter here into a detailed discussion of the many possible methods that might be used in the course of carrying out such a communications strategy.

**Supporting Collaborative Arrangements among Governments, Non-Governmental Organizations (NGOs) and Communities**

In most places, governments will have great difficulty reaching all parts of the country and all groups with projects or programs of child care and development. Moreover, programs that are run by governments (even at state or district levels) tend to be top-down, top-heavy programs with relatively little flexibility to adjust to local situations and with little ability to foster real participation and management within local communities. In the long run local communities must take on a coordinating and sustaining role.

Non-governmental organizations often (not always) have a greater ability than governments to accompany communities in developing the organizational structures and processes that will allow a project to be sustained once special inputs have been provided at an early stage to get the project going. NGOs tend to be more flexible and to respond to the local traditions and circumstances of particular communities. These are particularly important skills when working with early childhood development.

For these reasons, one element in a child development strategy is to foster collaborations between governments and NGOs. This might occur in a number of ways, depending on the local conditions and the respective management abilities of both governments and the NGOs in question. In some cases, arrangements might be sought in which funds for agencies like the World Bank would be transferred directly to NGOs, with, of course, proper agreements beforehand about how these funds would be used and about accounting procedures. In other cases, the government might keep more direct control over funds, but contract NGOs for particular program tasks or for work in particular areas.

**Supporting Evaluation and Research**

This paper has presented results from a range of evaluations of early childhood development programs carried out in Latin America and elsewhere. However, the number of solid, well designed evaluations is not very high, particularly in light of the wide variety of types of early childhood projects and programs that are, and can be carried out. Moreover, many of the evaluations that have been done are evaluations of smaller pilot or demonstration programs in which the conditions for success are relatively good. These help to make the argument that positive results are possible, but we need a much greater knowledge base to answer questions about who benefits most from what types of programs under what conditions and at what cost, and particularly as programs "go to scale."

With its technical capacity and its ability to provide funding in areas that governments might not normally include in a project, the World Bank is in a particularly good position to make an important contribution to the field of early childhood development by supporting sound evaluations of the projects being supported with Bank loans. Such evaluations would serve the purposes of the borrowing countries by facilitating adjustments of programs along the way and providing a firmer basis for their own decisions about programs and budgets once the Bank's loan has run its course. They would also allow the Bank to fulfill its responsibility in monitoring the loans.

The Bank is also in a position to fund particular research studies that will strengthen the knowledge base within the field. Here we will make reference to two areas that are in need of funding but which would produce important results.

*Longitudinal studies* are needed within various locations in the Third World that either corroborate or modify conclusions flowing presently from longitudinal studies in the United States and Europe. These longitudinal studies might be started within program evaluations. However, to serve their purpose, they should be carried beyond the normal 5-year life of a project loan. This may require a special arrangement. In addition, it would be necessary from the outset of the evaluation to assure that comparative groups are established in a way that it is possible to control for a range of non-project variables when judging outcomes.

*Instruments and measures* of a child's developmental status that are appropriate to the particular countries in which they are to be used are missing in most locations. Creating such instruments, validating them and establishing norms should be a high priority in order for countries to be able to monitor the psycho-social components of child development as they now monitor physical development through indicators of health and nutritional status (see Landers, 1992).

*Innovative financing schemes should be studied.* The ability of governments to finance programs has been a stumbling block to growth for early childhood development, as for other fields in the social arena. There are, however, innovative methods of financing that have been applied with apparent success over the years or that are now emerging. These need to be

examined for their possible application in other countries and for the general lessons that can be learned with respect to their application.

**Organizational Strategies**

As countries and development agencies such as the World Bank consider what steps to take to strengthen programs of early childhood care, development and education, several organizational considerations should be addressed.

*Organizational policy.* If one does not already exist, an official document is needed reviewing policy options and outlining a strategy for investing in the integral development of children during their preschool years. Discussion of such a document would create awareness and can legitimate work in the area while providing some technical and strategic guidelines. The starting point for the document might be the Declaration and Plan of Action of the World Conference on Education for All. However, if that is so, care should be taken not to restrict consideration to the education sector, leading to our next point.

*Integration.* The need to work in a multi-sectoral manner when dealing with early childhood care, development and learning needs to be confronted and organizational devices created to facilitate the needed collaboration. At a minimum, an organizational mechanism needs to be created to provide information across sectoral lines as projects are being developed within any one sector. Particular attention needs to be given to coordination between nutrition and education programs. In sectoral projects there is a strong tendency to focus exclusively on one component. This is reinforced by bureaucratic divisions and turf battles in individual countries.

*Guidelines.* Within education, and in other sectors, guidelines for sector analyses and project identification exercises need to be re-examined and rewritten to incorporate explicit attention to early childhood development and education in its various dimensions. The result should establish guidelines with respect to the organizational processes, but should also attempt to specify characteristics of projects that would be given priority. The seven criteria for judging programs set out in the Framework presented in this paper might provide a starting point for such a discussion.

*Analytical capacity.* To help determine organizational policy, set guidelines, and promote integrated programs, the capacity of countries and of lending agencies to work in this area needs to be strengthened. Although considerable work can be carried out using consultants and in collaboration with such organizations as UNICEF, capacity is needed to help bring people together from different program sectors to formulate policy, to help locate and supervise technical assistance, to provide technical guidance, and to analyze, monitor and evaluate integrated early childhood programs.

*Collaboration.* There is a need to seek collaboration at various levels. At the country level, it is crucial to look for ways in which governmental and non-governmental organizations

can collaborate and in which both can work with communities. In seeking community collaboration, care must be taken not to look at communities simply as sources of funding; they must be involved in design, implementation and evaluation. At an international level, it is important to assure that knowledge and experience is accumulated. For instance, UNICEF, the Bernard van Leer Foundation and international NGOs such as Save the Children, the Christian Children's Fund and plan International have a wealth of experience that can be drawn upon.

**Cautions**

Finally, as individual countries and agencies such as the World Bank contemplate setting a child development policy, several cautions should be noted:

- Considerable stress has been placed on the integrated development of young children in this paper and, consequently, on bringing together program components from different sectors. However, *"integration" is not something that is easily forced.* It may be necessary to seek the coming together of programs by focussing them on the same population, even though delivery systems are not formally integrated. leaving the task of integration to community and participants. It may also be necessary to seek integration of components within sectors, and over time, not all at once. Finally, integration of the content of programs (e.g., putting a mental and social development component into the content of a health service) may be easier than trying to get people from different programs to work together.

- While it is important to attend to quality, *it may be counter-productive to insist on standards that are so high that they undercut worthwhile initiatives* that do not meet the high standards. For example, setting high certification standards for preschool teachers may improve the quality of early education, but may also prevent many talented and capable individuals from working with young children in less formal early childhood programs.

- *Beware of projects that are too centralized.* If projects are centrally directed, the possibility of real and continuous participation by communities is drastically reduced as is the possibility of meaningful adjustment to local cultural differences.

- *Think long term.* A long term viewpoint is critical from at least three standpoints. First, programs are often slow to develop: the tendency to fund them for short periods and then to move on quickly to another is a formula for failure. Second, integrated programs may have to become integrated over time. If one tries to do too much all together at the outset, the attempt to integrate may place an overload on the system that can only be countered by spreading out over time. Third, a longer term view allows setting of very concrete expectations in the short run, leaving some of the expected results to be accomplished over time. This more realistic view helps to moderate "failures" which are really not failures but which are the result of not measuring up to unrealistically high expectations set in the short run.

With these cautions firmly in mind, integration, quality and participation can become something more than slogans in programming, to the benefit not only of program realization but, more importantly, to the benefit of those millions of children who suffer from delayed or debilitated development in their early years.

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## APPENDIX A: CASE STUDIES

### COLOMBIA: The PROMESA Project

The PROMESA project, designed to develop a better environment for the healthy development of young children, began in 1978 in four rural and isolated communities in the impoverished Chocó Region on Colombia's Pacific coast. Over the years, the project evolved to include:

- a program for mothers of preschool children designed to foster the intellectual development of children 3 to 7 years old during their daily interactions with the children and through the use of games.
- a series of projects to improve the physical environment by building latrines, disposing of garbage, draining stagnant water, controlling animals and finding sources of good water.
- a community-administered Primary Health Care program to overcome lack of a doctor.
- training of "promoters" as a way of developing local leaders.
- adult education and vocational training to improve income-generating skills as well as formation of production and marketing groups.
- an early stimulation program for mothers of 0- to 3-year old.
- a nutrition program, providing food to preschoolers and nutrition education to mothers.

In 1986, the effect of the project on school achievement of participating children using a "cohort design." With such a design,

> "...the children came from the same population and were only different in their ages. Thus, if the program was effective in giving the younger children more opportunities to learn, then each year, the children in the first grade should test somewhat better than those children who were in the first grade the previous year. This should be true throughout the elementary school as the project progressed..." (p. 7)

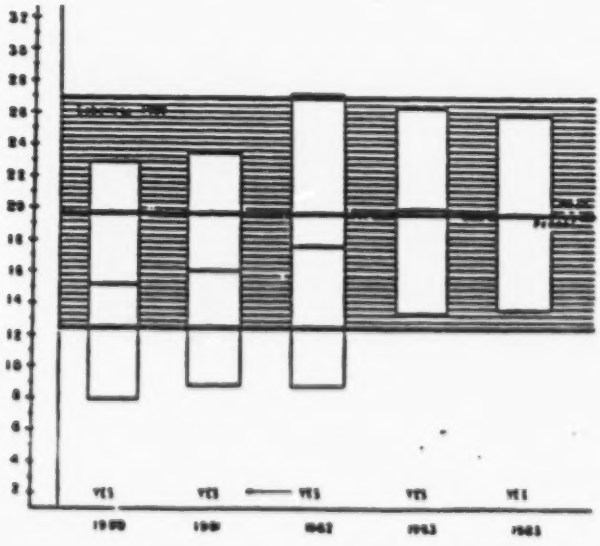
Three related achievement tests were developed: one for the first grade, one for the second and third grades, and one for the fourth and fifth grades, each with subtests on mathematics, language and problem solving. These tests were administered each year from 1980 through 1985. Children in a public school of a blue collar neighborhood (Sabeneta) of the Colombian City, Medellin, were also tested, to provide comparative baseline data.

In general, the hypothesized improvement in academic achievement occurred over time.

"The mathematics, language and problem solving scores for the first grade [went] . . . from significantly below the Sabaneta group to being on a par with that group. . . . the same pattern holds for all five years." (p. 8)

A graph illustrating the changes in mean scores at the first grade level is presented in Figure 3. The shaded area represents one standard deviation on either side of the urban childrens' mean score in the first grade. The white areas represent one standard deviation on either side of the mean test score for rural project children. In 1980, the two means were five points apart; in 1985, rural children had caught up to the 1980 norm. We do not know from the study whether the mean for urban children changed from 1980 to 1985.

**Figure 3**
Means and Standard Deviations of First Grade Mathematics Test Scores in Choco, 1980 through 1985, compared to Sabaneta 1980



Taken from: Nimnicht and Posada, 1986, p. 13

Persistence in school was studied using information from a sample of mothers from the project communities who were interviewed in 19809 and in 1986. (The evaluation does not report how the sample was chosen.) In the interviews, the name, age, and grade level attained in school for each child in the family was obtained. From this listing, twelve-year old were selected out for study because they were old enough to have completed the elementary school and young enough in 1986 to have been involved in PROMESA. The comparisons, presented in Table 3, show that school enrollment and persistence is significantly higher for PROMESA participants than for others, a strong finding given the high probability of contamination effects for the non-PROMESA children. We do not know, however, how PROMESA children may differ from non-PROMESA children.

**Table 3.**
A Comparison of School Enrollment:
PROMESA and non-PROMESA Children

| | 1980 | PROMESA-NO 1986 | PROMESA-YES 1986 |
|---|---|---|---|
| | N = 67 | N = 30 | N = 48 |
| More than 5 years | 5% | 13% | 16% |
| Reach the 5th grade | 12% | 23% | 35% |
| Reach the 4th grade | 31% | 30% | 60% |
| Reach the 3rd grade | 55% | 47% | 73% |
| Reach the 2nd grade | 76% | 77% | 83% |
| Reach the 1st grade | 90% | 87% | 100% |

Using the Non-parametric Kolmogorov-Smirnov two sample tests, we made the following comparisons:

1980 y No PROMESA 1986 $X^2 = 1.08$ 2df. P = 0.70
1980 y PROMESA 1986 $X^2 = 9.17$ 2df. P = 0.1
1986 PROMESA y No PROMESA $X^2 = 6.65$ 2 df. P = 0.5

Taken from Nimnicht and Posada, p. 9.

## TURKEY

The purpose of this action research project, carried out over a four-year period by Kagitcibasi and colleagues (1987), was to study the impact on the overall development of the child of educational preschool care combined with a program of parental education and support. Effects of this optimal combination were compared with effects of custodial child care and home care, each taken alone and in combination with parental education. Accordingly, the 251 children in this project are found in six experimental groups defined by their preschool environment and by whether or not their mothers received supplementary support and training:

| | | |
|---|---|---|
| (1) educational preschool with maternal training | [ED-MT] | N = 27 |
| (2) educational preschool with no maternal training | [ED-NMT] | N = 37 |
| (3) custodial preschool with maternal training | [CUST-MT] | N = 40 |
| (4) custodial preschool with no maternal training | [CUST-NMT] | N = 65 |
| (5) children at home with maternal training | [HOME-MT] | N = 23 |
| (6) children at home with no maternal training | [HOME-NMT] | N = 59 |
| | Total = | 251 |

Each of these six groups was made up of 3- and 5--year old (132 and 110, respectively).

The project was carried out in five low-income areas of Istanbul with intact families, most of which were nuclear (74%). Most mothers (75%) were born in rural villages or small towns. The mean years of school attendance by mothers was 5.4 Two-thirds of the mothers worked, many in factories where the educational and custodial preschools were located.

Educational and custodial preschool environments were chosen from existing programs on the basis of systematic observations (of centers and teachers), and of interviews with staff. Marked differences were evident between preschools classified as "educational" and as "custodial" -- in staff/child ratios, in facilities and materials available, and in the approach taken by teacher-caregivers. Children were randomly selected from three educational preschools and three custodial preschools (randomly after dropping out children from families not intact, children of the wrong age and children who were recent arrivals at the preschool). Once the preschool children were selected, a comparison group of children was located who came from the same neighborhoods and who matched the preschool children on age, economic, and family criteria but who did not attend preschool.

During year one of the study (1982-83), all mothers were interviewed, all mother/child dyads were observed at home, all preschool children were observed and tested at the preschool, and home children were tested at home. Baseline data included information about mothers' childrearing practices and patterns and their expectations for their children. Children were tested using a wide range of cognitive, personality, and social measures.

During **years two and three**, mothers of half the children in each preschool environmental setting were provided with training, through bi-weekly home visits by trained para-professionals, with group discussions led by supervising professional staff in alternate weeks. Cognitive development was fostered using a Turkish adaptation of HIPPY (Home Intervention Program for Preschool Youngsters), a home-based enrichment program, with materials provided for educational activities to improve language, sensory and perceptual discrimination skills, and problem solving. Social and personality development was approached through modelling and discussions of the mother-child interaction, and by supporting mothers in developing their own feelings of competence, efficacy and self-confidence. Beginning with the second year (when the 5-year-old group entered school), school grades were obtained at the end of each semester.

In the **fourth year**, children were again observed and tested, and school achievement data were collected.

Over the four years, significant defects of both the educational preschool environment mother training were found on measures of IQ and other measures of mental ability and cognitive skills as well as on school achievement. Preschool environment and home training effects were additive. Results are summarized as follows:

> "The ED [Educational Preschool] group showed a significantly superior performance on 23 of the measures reported and a non-significant, but positive trend on five of them. By contrast, the CUST [Custodial Preschool] group showed a significantly superior performance on only 3 of the measures, while the HOME group never had the highest score. Likewise, the MT [Maternal Training] group was superior to the NMT [No Maternal Training] group on 12 of the measures and showed a nonsignificant but positive trend on 15 of them, while the NMT group was in no case significantly superior." (p. 52)

Results for personality and social development were not so clear, with few statistically significant findings related to preschool environment or to training. Bi-modal distributions complicated the interpretation of autonomy/dependence measures. There was no difference among groups in school adjustment. The MT groups were, however, significantly less aggressive than the NMT groups.

With respect to the mothers:

> "The mother training program appears to have made a considerable impact on the mother's style of interaction with the child, leading to a style that is generally more focussed on the child, more verbal, less punitive, more cognitively stimulating, and more supportive of the child's developing autonomy." (p. 61)

In addition, different outlooks and patterns of family interaction were found with MT mothers more optimistic and likely to share in decisions and activities with their spouses.

Regression analyses were run on the academic average of children, and on their grades in mathematics and Turkish in the fourth year of the study (third year of primary for 5-year old and the first year for 3-year old). The results indicated that preschool environment, a comparatively high level of environmental stimulation [as measured by an environmental stimulation index derived for each home], and the mother's expectation of competence from the child, are the variables most strongly and consistently related to academic achievement as reflected in school grades. (pp. 65-6).

## PHILIPPINES: The Early Childhood Enrichment Program

The Early Childhood Enrichment Program (ECEP) delivers early childhood learning opportunities to disadvantaged preschoolers, ages 0 to 6. The program was envisioned as an alternative to formal preschool education and a way to reach out to the 80 percent of the children, 0 to 6, who were not served by any form of structured early childhood education. The program was pilot-tested from 1979-1982 and was implemented nationally beginning in 1983.

ECEP sought to maximize the use of existing government and non-governmental facilities and delivery systems to provide young children with enriching experiences. The main implementing organizations were the Department of Social Welfare and Development (which operates child care centers), and the Bureau of Agricultural Extension. These organizations were supported by the Child Development Center of the University of the Philippines, the Nutrition Center of the Philippines "Mental Feeding" Program, the Children's Communication Center, and the Child and Youth Research Center. Program activities were coordinated and monitored by an Interagency Committee. Technical and financial assistance was provided by the National Economic Development Authority, with support also from UNICEF.

In center-based settings, ECEP was directed toward day care workers and toward volunteer workers of Rural Improvement Clubs. Home visits were handled by social workers or by home management technicians. Parents were encouraged to participate through involvement in parental education and through community projects. The various education agents and parents were provided with training and a wide range of materials including a "thinking games" kit, a compilation of songs, poems and toys for pre-schoolers, books, and a manual for workers and parents on the effective use of story telling as a medium for early learning. In the five-year period from 1983 through 1987, it is estimated that 570,000 parents, 4,080 day care workers and 12,000 Rural improvement Club leaders participated in ECEP.

An impact evaluation of the ECEP program was carried out in order to determine effects of the program during the 1983-1987 period. The evaluation compared national samples of children who participated in ECEP (in either the center- or home-based alternative) with a sample who had not, pre-testing and post-testing each group. During the longitudinal study, a third group appeared, of those children from both groups who entered a formal preschool program. In addition, the evaluation questioned parents (180), ECEP workers (60), and community leaders (124). An extensive battery of tests and scales was applied to determine the level of performance or the developmental profile of children. In addition, some children were followed into primary schools.

In general, children who were involved in the ECEP program tested better than children who had not participated. For different measures, different modes seemed to have a greater effect. For example, children in the home-based ECEP seemed to develop their motor skills and personal-social behavior more rapidly whereas center-based programs had a greater effect on cognitive-adaptive skills. Children who had participated in early childhood education (including

ECEP and preschools) performed significantly better in Grades I and II. While the differences tended to level off in Grade III, the trend still favored those from early education programs.

ECEP workers and parents improved their knowledge, attitudes and practices. Community leaders were generally aware of the program and supportive, in the main.

The impact evaluation concluded:

> "The results of the impact study of the Early Enrichment Program ...provided adequate evidence to support the claim that indeed ECEP (whether in the homes or centers) was worth all the effort and resources poured into it. Despite the not-so-orderly fashion of benefits derived from ECEP, it is clear that the cumulative effects of the program have gone even beyond its immediate beneficiaries." (Child and Youth Research Center, p. 122)

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